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ESR-3026

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Valid: 04/15 to 04/16

DIVISION: 07 00 00—THERMAL AND MOSITURE PROTECTION
SECTION: 07 53 23—ETHYLENE-PROPYLENE-DIENE-MONOMER ROOFING

REPORT HOLDER:

FIRESTONE BUILDING PRODUCTS COMPANY, LLC

**250 WEST 96TH STREET
INDIANAPOLIS, INDIANA 46260-1316**

EVALUATION SUBJECT:

FIRESTONE RUBBERGARD EPDM SINGLE-PLY ROOFING MEMBRANES



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**DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION**
**Section: 07 53 23—Ethylene-Propylene-Diene-Monomer
Roofing**
REPORT HOLDER:

FIRESTONE BUILDING PRODUCTS COMPANY, LLC
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(800) 428-4442
www.firestonebpco.com

EVALUATION SUBJECT:
**FIRESTONE RUBBERGARD EPDM SINGLE-PLY
ROOFING MEMBRANES**
ADDITIONAL LISTEE:

GENFLEX ROOFING SYSTEMS, LLC
250 WEST 96TH STREET
INDIANAPOLIS, INDIANA 46260
(800) 443-4272
www.genflex.com

1.0 EVALUATION SCOPE
Compliance with the following code:

- 2009 *International Building Code*® (IBC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)[†]

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Weather resistance
- Fire classification
- Wind uplift resistance
- Impact resistance

2.0 USES

Firestone RubberGard EPDM single-ply roofing membranes are used as roof coverings in ballasted, adhered and mechanically fastened membrane roofing systems.

3.0 DESCRIPTION
3.1 General:

The RubberGard EPDM Membrane Roofing Systems described in this report consist of single-ply roofing membranes, insulation (where used), barrier board or slip

sheet (where used), flashing, mechanical fasteners and adhesives that are installed on a combustible or noncombustible deck.

3.2 EPDM Membranes:

3.2.1 Standard RubberGard: Standard RubberGard is a nonreinforced EPDM single-ply roofing membrane, available in nominally 45-mil (1.1 mm) or 60-mil (1.5 mm) thicknesses. The 45-mil-thick membrane weighs approximately 0.29 lb/ft² (1.4 kg/m²) and is available in rolls of various widths and lengths. The 60-mil-thick membrane weighs approximately 0.40 lb/ft² (2 kg/m²) and is available in rolls of various widths and lengths.

3.2.2 Standard RubberGard FR: Standard RubberGard FR is a nonreinforced fire-resistant EPDM single-ply roofing membrane, available in nominally 45-mil (1.1 mm) or 60-mil (1.5 mm) thicknesses. The 45-mil-thick membrane weighs approximately 0.31 lb/ft² (1.5 kg/m²) and is available in 100 feet long by 7.5 feet or 9 feet wide (30.5 m by 2.3 or 2.7 m) rolls. The 60-mil-thick membrane weighs approximately 0.43 lb/ft² (2.1 kg/m²) and is available in 100 feet long by 7.5 feet or 9 feet wide (30.5 m by 2.3 or 2.7 m) rolls.

3.2.3 RubberGard LS-FR: Standard RubberGard LS-FR is a nonreinforced fire-resistant EPDM single-ply roofing membrane, available in nominally 45-mil (1.1 mm) or 60-mil (1.5 mm) thicknesses. The 45-mil-thick membrane weighs approximately 0.31 lb/ft² (1.5 kg/m²) and is available in rolls of various widths, 100 feet long (30.5 m). The 60-mil-thick membrane weighs approximately 0.43 lb/ft² (2.1 kg/m²) and is available in rolls of various widths, 100 feet long (30.5 m).

3.2.4 RubberGard LS-FR PT: Standard RubberGard LS-FR PT is a nominally 60-mil (1.5 mm) thick, nonreinforced fire-resistant EPDM single-ply roofing membrane, with a pre-applied 3-inch or 6-inch-wide (76 or 152 mm), 0.035-inch-thick (0.9 mm) Quick Seam tape laminated along the length of the membrane. The membrane weighs approximately 0.31 lb/ft² (1.5 kg/m²) and is available in rolls of various widths, 100 feet long (30.5 m).

3.2.5 RubberGard MAX: RubberGard MAX is an internally-reinforced EPDM single-ply roofing membrane, available in nominally 45-mil (1.1 mm), 60-mil (1.5 mm) or 75-mil (1.9 mm) thicknesses. The 45-mil-thick membrane weighs approximately 0.32 lb/ft² (1.5 kg/m²) and is available in 100-foot-long by 7.5-foot or 10-foot-wide (30.5 m by 2.3 or 3 m) rolls. The 60-mil-thick membrane weighs approximately 0.42 lb/ft² (2.0 kg/m²) and is available in 100-foot-long by 7.5-foot or 10-foot-wide (30.5 m by 2.3 or 3 m) rolls. The 75-mil-thick membrane weighs approximately 0.52 lb/ft² (2.4 kg/m²) and

is available in 100 feet long by 7.5 feet or 10 feet wide (30.5 m by 2.3 or 3 m) rolls.

3.2.6 RubberGard MAX PT: RubberGard MAX PT is an internally-reinforced EPDM single-ply roofing membrane, available in nominally 45-mil (1.1 mm), 60-mil (1.5 mm) or 75-mil (1.9 mm) thicknesses, with a pre-applied 3-inch or 6-inch-wide (76 or 152 mm), 0.035-inch-thick (0.9 mm) Quick Seam tape laminated along the length of the membrane. The 45-mil-thick membrane weighs approximately 0.33 lb/ft² (1.6 kg/m²). The 60-mil-thick membrane weighs approximately 0.43 lb/ft² (2.1 kg/m²). The 75-mil-thick membrane weighs approximately 0.56 lb/ft² (2.7 kg/m²). Membranes are available in 100-foot-long by 7.5-foot or 10-foot-wide (30.5 m by 2.3 or 3 m) rolls.

3.2.7 RubberGard MAX FR: RubberGard Max FR is an internally-reinforced, fire-resistant, EPDM single-ply roofing membrane available in nominally 45-mil (1.1 mm), 60-mil (1.5 mm) or 75-mil (1.9 mm) thicknesses. The 45-mil-thick membrane weighs approximately 0.32 lb/ft² (1.5 kg/m²) and is available in 100 feet long by 7.5 feet or 10 feet wide (30.5 m by 2.3 or 3 m) rolls. The 60-mil-thick membrane weighs approximately 0.42 lb/ft² (2.0 kg/m²) and is available in 100 feet long by 7.5 feet or 10 feet wide (30.5 m by 2.3 or 3 m) rolls. The 75-mil-thick membrane weighs approximately 0.52 lb/ft² (2.5 kg/m²) and is available in 100-foot-long by 7.5-foot or 10-foot-wide (30.5 m by 2.3 or 3 m) rolls.

3.2.8 RubberGard Platinum: RubberGard Platinum is a nominally 90-mil (2.2 mm) thick, nonreinforced, EPDM single-ply roofing membrane. The membrane weighs approximately 0.56 lb/ft² (2.7 kg/m²) and is available in 50-foot or 100-foot-long by 10-foot-wide (15.2 or 30.5 m by 3 m) rolls.

3.2.9 RubberGard EcoWhite: RubberGard EcoWhite is a nominally 60-mil (1.5 mm) thick, nonreinforced, bi-laminate, white-on-black, cured single ply roofing membrane. The membrane weighs approximately 0.43 lb/ft² (2.1 kg/m²) and is available in rolls of various widths, 100 feet long (30.5 m).

3.2.10 RubberGard EcoWhite Platinum: RubberGard EcoWhite Platinum is a nominally 90-mil (2.3 mm) thick, nonreinforced, bi-laminate, white-on-black, cured single ply roofing membrane. The membrane weighs approximately 0.61 lb/ft² (3.0 kg/m²) and is available in 100-foot-long by 10-foot-wide (30.5 m by 3 m) rolls.

3.3 Insulation:

See Tables 1 through 5 for insulations used with specific roofing systems. Foam plastic insulation, where used, must have a flame-spread index of not more than 75 when tested at the maximum thickness intended for use in accordance with ASTM E 84. Polyisocyanurate and polystyrene foam plastic insulation must comply with ASTM C 1289 and ASTM C 578, respectively, and with Chapter 26 of the IBC.

3.4 Barrier or Coverboard:

Barrier or coverboard, when used, may be any of the following:

- Minimum 1/4-inch-thick (6.4 mm) G-P Gypsum Corporation DensDeck or DensDeck Prime.
- Minimum 1/2-inch-thick (12.7 mm) gypsum board, complying with ASTM C 1396.
- One-half-inch-thick (12.7 mm) Firestone ISOGARD HD or Firestone Resista.
- One-half-inch-thick (12.7 mm) USG Corporation Securock.

3.5 Fasteners:

Fasteners and stress plates used to attach barrier or cover boards, insulation boards and roofing membranes must be corrosion-resistant. Fasteners may be any of the Firestone insulation and membrane fasteners, plates and strips summarized in this section or noted in Table 4.

3.5.1 Firestone All-Purpose Fasteners: An epoxy-coated steel screw used in combination with the Firestone Insulation Fastening Plate to attach roofing insulation and base sheets to steel and wood substrates. Fastener length must be sufficient to penetrate through the steel deck a minimum of 3/4 inch (19 mm), and into the wood deck a minimum of 1 inch (25.4 mm).

3.5.2 Firestone Heavy-Duty Fastener: An epoxy-coated steel screw used in combination with the Firestone Insulation Fastening Plates, Firestone Batten Strips, Seam Plates or Termination Bars to attach roofing insulation and base sheets to steel, wood and concrete decks. Fastener length must be sufficient to penetrate through the steel deck a minimum of 3/4 inch (19 mm), and into the wood or concrete deck a minimum of 1 inch (25.4 mm).

3.5.3 Firestone Concrete Drive Fastener: A nonthreaded hammer-in fastener, epoxy-coated, used with Firestone Insulation Plates to attach roofing insulation, base sheets and other accessories to structural concrete substrates. Fastener length must be sufficient to penetrate into the concrete deck a minimum of 1 1/4 inch (32 mm).

3.5.4 Firestone Insulation Fastening Plate: A 3-inch diameter (76 mm) galvalume plate used in combination with Firestone fasteners to secure insulation and base sheets to the roof deck.

3.5.5 Firestone Seam Plate: A 2-inch (50 mm) diameter, galvalume plate used in combination with Firestone All-Purpose, Heavy-Duty and Concrete Drive fasteners.

3.5.6 Firestone V-Plate: A 2.25-inch (57 mm) diameter, galvalume plate used in combination with Firestone All-Purpose, Heavy-Duty and Concrete Drive fasteners to secure Firestone RubberGard MAX and Firestone QuickSeam Strips.

3.5.7 Firestone Batten Strip: A corrosion-resistant, 10 foot long by 1 inch wide (3 m by 25.4 mm), galvalume metal batten strip with holes spaced 6 inches (152 mm) o.c.

3.5.8 Firestone Polymer Batten Strip: A corrosion-resistant polymer batten strip, with holes spaced 3 inches (76 mm) o.c., available in 250 feet long by 3/4 inch wide (76.2 m by 19 mm) rolls.

3.5.9 QuickSeam R.M.A. Strip: A 10-inch-wide (254 mm) UltraPly TPO membrane with two 3-inch-wide (76 mm) strips of laminated tape coming in from both sides along the length of the strip design to anchor approved membranes to substrate.

3.6 Adhesives:

3.6.1 Firestone Water-Based Bonding Adhesive (S) [WBBA (S)]: A contact adhesive designed for bonding Firestone roof covers to wood, metal, masonry and other acceptable substrates. The adhesive is applied to both the substrate and the underside of the membrane with a coverage of approximately 100 to 125 ft² (9.3 to 11.62 m²) per gallon (3.78 L), total, for both the substrate and the membrane. The adhesive has a shelf life of one year when stored in unopened containers at temperatures between 60°F (16°C) and 80°F (27°C).

3.6.2 Firestone BA-2004 (T) or Single-Ply LVOC Bonding Adhesive: Solvent based, contact adhesives

designed for bonding Firestone RubberGard EPDM membranes and flashings to wood, metal, masonry and other substrates as specified in the report holder's or additional listee's installation instructions. Either adhesive is applied to both the substrate and the underside of the membrane with a coverage of approximately 45 to 60 ft² (4.18 to 5.58 m²) per gallon (3.78 L), total, for both the substrate and the membrane. Each adhesive has a shelf life of one year when stored in unopened containers at temperatures between 60°F (16°C) and 80°F (27°C).

3.6.3 Firestone I.S.O. Twin-Pack Insulation Adhesive:

A two-component, low-rise, polyurethane insulation adhesive designed for bonding roof insulations to deck substrate types as specified in the report holder's or additional listee's installation instructions. The components have a shelf life of one year when stored in unopened containers at temperatures between 60°F (16°C) and 80°F (27°C).

3.6.4 Firestone I.S.O. FIX: A single component, polyurethane adhesive designed for bonding of Firestone ISO 95+ GL, Fibertop, and DensDeck to substrates as specified in the report holder's or additional listee's installation instructions. The adhesive has a shelf life of 15 months when stored in unopened containers at temperatures between 50°F (10°C) and 75°F (24°C).

3.6.5 Firestone I.S.O. STICK: A two-component, low-rise polyurethane insulation adhesive designed for bonding insulations to specific deck substrate types as specified in the report holder's or additional listee's installation instructions. The components have a shelf life of 18 months when stored in unopened containers at temperatures between 60°F (16°C) and 80°F (27°C).

3.7 Surface Coating:

Firestone AcryliTop PC-100 is an acrylic coating that may be spray-applied in one coat or roller-applied using two coats. When spray-applied in one coat, the AcryliTop PC-100 has a coverage rate of approximately 100 ft² (9.3 m²) per gallon (3.78 L). For roller application, the Firestone AcryliTop PC-100 Base Coat is applied in one coat at a coverage rate of 200 ft² (18.6 m²) per gallon (3.78 L). The second coat of AcryliTop PC-100 is applied at a 100 ft² (9.3 m²) per gallon (3.78 L). The AcryliTop PC-100 has a shelf life of one year when stored in unopened containers at temperatures between 60°F (16°C) and 80°F (27°C).

3.8 Impact Resistance:

The Firestone RubberGard EPDM roofing systems described in this report comply with the impact resistance requirements set forth in Section 5.5 of FM 4470.

4.0 INSTALLATION

4.1 General:

Installation of the EPDM roofing membranes described in this report must comply with the applicable code, the report holder's or additional listee's published installation instructions and this report. The report holder's or additional listee's published installation instructions must be available on the jobsite at all times during installation.

The substrate to which the membrane is to be applied must be clean, dry, and free of frost, loose fasteners, and other protrusions or contaminants that will interfere with the adhesion or attachment of the membrane or that will puncture the membrane. All materials must be protected against contact with incompatible materials. Where gypsum board is used as barrier board in the roofing assembly, weather protection must be provided to prevent damage to the gypsum board prior to application of the roofing membrane.

The slope of the roof on which the single-ply membrane systems are installed must be a minimum of 1/4:12 (2 percent slope) and must not be more than the maximum slope indicated for the particular assembly as listed in Tables 1 through 3.

Penetrations and terminations of the roof covering must be flashed and made weathertight in accordance with the requirements of the membrane manufacturer and Section 1503.2 of the IBC. Where flashing is of metal, the metal must be corrosion-resistant, minimum No. 26 gage [0.019 (0.483 mm)] galvanized steel.

4.2 Fire Classification:

4.2.1 New Construction: Roof covering systems described in Tables 1 through 3, when installed in accordance with this report, are classified as Class A or B roof covering systems in accordance with ASTM E 108 or UL 790.

4.2.2 Reroofing: The existing deck must be inspected to verify that the structure to be reroofed is structurally sound and adequate to support and secure the roofing membrane. Prior to installation of new roof coverings, inspection by and written approval from the code official having jurisdiction must be required.

Class A, B, or C roof covering systems may be installed over existing classified roof covering systems under the following conditions without additional roof classification tests, provided the resulting classification is the lower of the new and existing roofing classification:

- New uninsulated systems installed only over existing uninsulated assemblies.
- New insulated systems installed over existing uninsulated systems only.

4.3 Wind Uplift Resistance:

4.3.1 New Construction: The allowable wind uplift pressures for the Firestone membrane roof covering systems described in the report are noted in Tables 4 and 5. Metal edge securement for all roofing systems must be designed and tested in accordance with ANSI/SPRI ES-1, complying with IBC Section 1504.5.

For mechanically attached membranes (Standard RubberGard, RubberGard LS-FR and RubberGard Max), the edge securement must be UNA-Edge GS Gravel Stop system with 0.040-inch-thick (1.02 mm) aluminum gravel stop and 20 gage [0.040-inch-thick (1.02 mm)] galvanized steel cleat. The maximum allowable loads at the roof edge are 94 plf (140 kg/m), 112 plf (167 kg/m) and 478 plf (711 kg/m), for the Standard RubberGard, RubberGard LS-FR and RubberGard Max, respectively.

The ballasted membrane roof covering system in Table 1 must comply with ANSI/SPRI RP-4.

4.3.2 Reroofing: Roof covering systems employing mechanical fasteners must be qualified to the satisfaction of the code official as to the adequacy of fasteners penetrating through existing roof coverings into structural substrates. Since the composition and/or condition of any particular underlying existing roofing material may vary widely, reroofing with adhered systems is outside the scope of this report.

5.0 CONDITIONS OF USE

The Firestone RubberGard EPDM single-ply roofing membranes described in this report comply with, or are suitable alternatives to what is specified in the IBC, subject to the following conditions:

5.1 Installation of the roofing systems must comply with the IBC, the report holder's or additional listee's

published installation instructions and this report. The instructions within this report govern if there are any conflicts between the report holder's or additional listee's published installation instructions and this report.

- 5.2 The roof covering systems must be installed only by applicators approved by Firestone Building Products Company, LLC or Genflex Roofing Systems, LLC.
- 5.3 Foam plastic insulation must be separated from the interior of the building by an approved thermal barrier in accordance with IBC Section 2603.4.1.5.
- 5.4 Foam plastic insulation, where used, must bear the label of an approved agency indicating that the foam plastic has a flame-spread index of not more than 75 when tested at the maximum thickness intended for use in accordance with ASTM E 84 or UL 723, subject to the approval of the code official.
- 5.5 Above-deck thermal insulation board must comply with the applicable standards listed in Table 1508.2 of the IBC.
- 5.6 Design wind-uplift pressure on any roof area, including edge and corner zones, must not exceed the allowable wind pressure for the system installed in that particular area. Refer to the allowable wind uplift pressure for roof coverings as listed in Tables 4 and 5.
- 5.7 The allowable wind uplift pressures listed in Tables 4 and 5 are for the roof covering only. The deck and

framing to which the roof covering is attached must be designed for the applicable components and cladding wind loads in accordance with the IBC.

- 5.8 Calculations demonstrating that the required wind resistance is less than the allowable wind resistance must be submitted to the code official.
- 5.9 When application is over existing roofs, documentation of the wind uplift resistance of the composite roof construction must be submitted to the code official for approval at the time of permit application.
- 5.10 The membranes are manufactured in Prescott, Arkansas and Kingstree, South Carolina, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Membrane Roof Covering Systems (AC75), dated July 2010.

7.0 IDENTIFICATION

Each roll of roofing membrane described in this report is identified with a label indicating the report holder's name (Firestone Building Products Company, LLC) or the name of the additional listee (Genflex Roofing Systems, LLC), the product name, and the evaluation report number (ESR-3026).

TABLE 1—FIRE CLASSIFICATION ASSEMBLIES – BALLASTED ROOFING SYSTEMS

SYSTEM NO.	ROOF CLASS	SUBSTRATE	MAX. ROOF SLOPE	INSULATION ^{2,3}	MEMBRANE ¹	SURFACING
1	A	Combustible or noncombustible	2:12	(Optional) Any UL- classified foam plastic insulation	Any RubberGard EPDM membrane	River-bottom stones at min. 1000 lbs/100 ft ² or concrete pavers at min. 10 lbs/ft ²

For SI: 1 inch = 25.4 mm

¹Membranes must be UL-classified for roofing systems.

²All foam plastic insulation must be UL-classified foam plastic for roofing systems, and must be limited to the maximum thickness noted in Section 5.4 of this report.

³Polyisocyanurate insulation must comply with ASTM C 1289. Polystyrene insulation must comply with ASTM C 578.

TABLE 2—FIRE CLASSIFICATION ASSEMBLIES – ADHERED ROOFING SYSTEMS

SYSTEM NO.	ROOF CLASS	SUBSTRATE ²	MAX. ROOF SLOPE	INSULATION ^{1,3}	BARRIER OR COVER BD. ⁴	MEMBRANE ⁴		SURFACING ⁴
						TYPE	ADHESIVE ⁴	
1	A	Combustible	1½:12	--	Min. ¼-inch-thick DensDeck or DensDeck Prime, mechanically fastened to deck	RubberGard EcoWhite	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	--
2	A	Noncombustible	¼:12	Min. 1-inch-thick, any UL- classified polyisocyanurate insulation, mechanically fastened to steel deck or adhered to concrete deck	--	Standard RubberGard, RubberGard MAX or MAX PT	BA-2004 (T) or Single-Ply LVOC BA	--
3	A	Concrete	¼:12	Min. 1-inch-thick, any UL- classified polyisocyanurate insulation, adhered to deck	Min. ¼-inch-thick DensDeck or DensDeck Prime, adhered to insulation	Standard RubberGard	BA-2004 (T) or Single-Ply LVOC BA	--
4	A	Concrete	2:12	Same as System 3	Same as System 3	RubberGard Platinum	BA-2004 (T) or Single-Ply LVOC BA	---
5	A	Concrete	4½:12	Same as System 3	Same as System 3	RubberGard Platinum	BA-2004 (T) or Single-Ply LVOC BA	PC-100 Coating
6	A	Concrete	4:12	Same as System 3	Same as System 3	RubberGard MAX FR	BA-2004 (T) or Single-Ply LVOC BA	--
7	A	Noncombustible	1½:12	Same as System 2	--	RubberGard Platinum	BA-2004 (T) or Single-Ply LVOC BA	PC-100 Coating
8	A	Noncombustible	½:12	Same as System 2	--	RubberGard LS-FR, LS-FR PT, Platinum or EcoWhite	BA-2004 (T) or Single-Ply LVOC BA	
9	A	Concrete	½:12	Same as System 3	Same as System 3	Standard RubberGard, RubberGard MAX or MAX PT	BA-2004 (T) or Single-Ply LVOC BA	--
10	A	Noncombustible	¾:12	Max. 4-inch-thick Firestone "ISO 95+GL", adhered or mechanically fastened to deck	--	RubberGard EcoWhite or EcoWhite Platinum	WBBA (S)	--
11	A	Noncombustible	1½:12	--	Min. ¼-inch-thick DensDeck or DensDeck Prime, mechanically fastened to deck	RubberGard EcoWhite or EcoWhite Platinum	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	--
12	A	Noncombustible	½:12	(Optional) Any UL- classified polyisocyanurate insulation	Min. ½-inch-thick Firestone "ISOGARD HD" or "Resista", adhered or mechanically fastened to deck	RubberGard LS-FR, MAX or Platinum	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	(Optional) PC-100 Coating
13	A	Noncombustible	1:12	(Optional) Any UL- classified polyisocyanurate insulation	Same as System 12	Standard RubberGard, RubberGard FR or EcoWhite	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	(Optional) PC-100 Coating
14	A	Noncombustible	2½:12	(Optional) Any UL- classified polyisocyanurate insulation	Same as System 12	RubberGard MAX FR	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	(Optional) PC-100 Coating

TABLE 2—FIRE CLASSIFICATION ASSEMBLIES – ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	ROOF CLASS	SUBSTRATE ²	MAX. ROOF SLOPE	INSULATION ^{1,3}	BARRIER OR COVER BD. ⁴	MEMBRANE ⁴		SURFACING ⁴
						TYPE	ADHESIVE ⁴	
15	A	Noncombustible	2:12	(Optional) Any UL- classified polyisocyanurate insulation	Same as System 12	RubberGard Platinum	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	PC-100 Coating
16	A	Combustible	1/2:12	(Optional) Max. 4-inch-thick Firestone “ISO 95+GL”	Min. 1-inch-thick Firestone “ISOGARD HD” or “Resista”, adhered or mechanically fastened to deck	RubberGard LS-FR, MAX, MAX FR, Platinum or EcoWhite	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	(Optional) PC-100 Coating
17	A	Combustible	1/2:12	(Optional) Max. 4-inch-thick Firestone “ISO 95+GL”	Same as System 16	Standard RubberGard	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	PC-100 Coating
18	A	Combustible	1/2:12	2-inch-thick, any UL- classified polyisocyanurate insulation, mechanically fastened to deck	--	RubberGard EcoWhite	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	--
19	B	Combustible	1/2:12	(Optional) Max. 4-inch-thick Firestone “ISO 95+GL”	Min. 1/2-inch-thick Firestone “ISOGARD HD” or “Resista”, adhered or mechanically fastened to deck	RubberGard LS-FR, MAX, MAX FR, Platinum or EcoWhite	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	(Optional) PC-100 Coating
20	B	Combustible	1/2:12	(Optional) Max. 4-inch-thick Firestone “ISO 95+GL”	Same as System 19	Standard RubberGard	BA-2004 (T), Single-Ply LVOC BA or WBBA (S)	PC-100 Coating
21	A	Combustible	3:12	--	Min. 1/4-inch-thick DensDeck or DensDeck Prime, mechanically fastened to deck	RubberGard Platinum	BA-2004 (T) or Single-Ply LVOC BA	(Optional) PC-100 Coating
22	A	Noncombustible	1:12	--	Min. 7/16-inch-thick OSB, mechanically fastened to deck	RubberGard EcoWhite or EcoWhite Platinum	BA-2004 (T) or Single-Ply LVOC BA	--
23	A	Noncombustible	Unlimited	(Optional) Any UL- classified polyisocyanurate insulation	Min. 1/4-inch-thick DensDeck or DensDeck Prime, 1/4-inch-thick plywood or 7/16-inch-thick OSB, mechanically fastened to deck	RubberGard MAX FR	BA-2004 (T) or Single-Ply LVOC BA	--
24	A	Noncombustible	3:12	(Optional) Any UL- classified polyisocyanurate insulation	Same as System 23	RubberGard MAX FR	WBBA (S)	--
25	A	Noncombustible	3:12	(Optional) Any UL- classified polyisocyanurate insulation, adhered or mechanically fastened to deck	---	RubberGard MAX FR	BA-2004 (T) or Single-Ply LVOC BA	--
26	A	Noncombustible	2 1/2:12	Same as System 25	---	RubberGard MAX FR	WBBA (S)	--

For SI: 1 inch = 25.4 mm.

¹All foam plastic insulation must be UL-classified foam plastic for roofing systems, and must be limited to the maximum thickness noted in Section 5.4 of this report.

²Wood deck must be minimum 15/32-inch-thick (11.9 mm) plywood. Steel deck must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength (*f_c*) of 2500 psi. [minimum of 24MPa is required under ADIBC Appendix L, Section 5.1.1].

³Polyisocyanurate insulation must comply with ASTM C 1289.

⁴Barrier or cover boards, adhesives, membranes and surface coatings must be UL-classified for roofing systems.

TABLE 3—FIRE CLASSIFICATION ASSEMBLIES – MECHANICALLY FASTENED ROOFING SYSTEMS

SYSTEM NO.	ROOF CLASS	SUBSTRATE ²	MAX. ROOF SLOPE	INSULATION ^{1,3}	BARRIER OR COVER BD. ⁴	MEMBRANE ⁴	SURFACING ⁴
1	A	Noncombustible	1/2:12	(Optional) Any UL- classified polyisocyanurate insulation	Min. 1/2-inch-thick Firestone "ISOGARD HD" or "Resista"	RubberGard MAX	(Optional) PC-100 Coating
2	A	Noncombustible	1/2:12	(Optional) Max. 4-inch-thick Firestone "ISO 95+GL"	--	RubberGard LS-FR, RubberGard LS-FR PT or Platinum	--
3	A	Noncombustible	2 1/2:12	(Optional) Max. 4-inch-thick Firestone "ISO 95+GL"	--	RubberGard MAX FR	--
4	A	Noncombustible	4:12	(Optional) Any UL- classified polyisocyanurate insulation	Min. 1/4-inch-thick DensDeck or DensDeck Prime, 1/4-inch-thick plywood or 7/16-inch-thick OSB	RubberGard MAX FR	--
5	B	Combustible	1/2:12	(Optional) Max. 4-inch-thick Firestone "ISO 95+GL"	Min. 1/2-inch-thick Firestone "ISOGARD HD" or "Resista"	RubberGard LS-FR, MAX, MAX FR, Platinum	(Optional) PC-100 Coating
6	B	Combustible	1/2:12	(Optional) Max. 4-inch-thick Firestone "ISO 95+GL"	Min. 1/2-inch-thick Firestone "ISOGARD HD" or "Resista"	Standard RubberGard	PC-100 Coating
7	A	Combustible	2:12	1 1/2-inch-thick Firestone "ISO 95+GL"	Min. 1/4-inch-thick DensDeck or DensDeck Prime	RubberGard MAX FR	--
8	A	Combustible	1/2:12	1.3-inch-thick Firestone "ISO 95+GL"	--	RubberGard MAX FR	--

For **SI**: 1 inch = 25.4 mm.

¹All foam plastic insulation must be UL-classified foam plastic for roofing systems, and must be limited to the maximum thickness noted in Section 5.4 of this report.

²Wood deck must be minimum 5/32-inch-thick (11.9 mm) plywood. Steel deck must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength (f_c) of 2500 psi. [minimum of 24MPa is required under ADIBC Appendix L, Section 5.1.1].

³Polyisocyanurate insulation must comply with ASTM C 1289.

⁴Barrier or cover boards, membranes and surface coatings must be UL-classified for roofing systems.

TABLE 4—WIND RESISTANCE – ADHERED ROOFING SYSTEMS

SYSTEM NO.	DECK ³	INSULATION		COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		TYPE ^{1,2}	ATTACHMENT ¹	TYPE ¹	ATTACHMENT ¹	TYPE	ATTACHMENT ¹	
W-1	¹⁹ / ₃₂ -inch-thick plywood	--	--	¹ / ₂ -inch-thick DensDeck Prime or SECUROCK	All-Purpose Fastener with Fastening Plate at 1 fastener per 1.6 ft ²	RubberGard EcoWhite or EcoWhite Platinum	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	45
W-2	¹⁹ / ₃₂ -inch-thick plywood	2-inch-thick Firestone "ISO 95+GL"	Heavy-Duty Fastener with Insulation Fastening Plate at 1 fastener per 1.78 ft ²	--	--	RubberGard EcoWhite or EcoWhite Platinum	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	45
S-1	Steel	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	Heavy-Duty or All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 2 ft ²	¹ / ₂ -inch-thick "ISOGARD HD" or "Resista"	I.S.O. Twin-Pack Insulation Adhesive in continuous ¹ / ₂ - to ³ / ₄ -inch-wide beads at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	45
S-2	Steel	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	Mechanically fastened per FM preliminary fastening requirements	¹ / ₂ -inch-thick "ISOGARD HD" or "Resista"	Heavy-Duty or All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 2.7 ft ²	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	45
S-3	Steel	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 2 ft ²	--	--	Standard RubberGard, RubberGard LS-FR, LS-FR PT, FR, MAX, MAX FR, MAX PT or Platinum	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	45
S-4	Steel	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	Heavy-Duty or All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 2.7 ft ²	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	I.S.O. Twin-Pack Insulation Adhesive in continuous ¹ / ₂ - to ³ / ₄ -inch-wide ribbons at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	30
S-5	Steel	Min. 2-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	Heavy-Duty or All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 4 ft ²	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	I.S.O. Twin-Pack Insulation Adhesive in ¹ / ₂ - to ³ / ₄ -inch-wide ribbons at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	38

TABLE 4—WIND RESISTANCE – ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK ³	BARRIER BOARD		INSULATION		COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		TYPE	ATTACHMENT	TYPE ^{1,2}	ATTACHMENT ¹	TYPE ¹	ATTACHMENT ¹	TYPE	ATTACHMENT ¹	
S-6	Steel	--	--	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 2 ft ²	Min. 1/4-inch-thick DensDeck or DensDeck Prime	I.S.O. Twin-Pack Insulation Adhesive in continuous 1/2- to 3/4-inch-wide beads at 12 inches o.c.	Standard RubberGard, RubberGard LS-FR, LS-FR PT, FR, MAX, MAX FR, MAX PT, Platinum, EcoWhite or EcoWhite Platinum	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	45
S-7	Steel	--	--	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 1.6 ft ²	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	I.S.O. Twin-Pack Insulation Adhesive in continuous 1/2- to 3/4-inch-wide beads at 12 inches o.c.	Standard RubberGard, RubberGard LS-FR, LS-FR PT, FR, MAX, MAX FR, MAX PT, Platinum, EcoWhite or EcoWhite Platinum	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	75
S-8	Steel	--	--	Min. 2-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 1.6 ft ²	--	--	Standard RubberGard, RubberGard LS-FR, LS-FR PT, FR, MAX, MAX FR, MAX PT, Platinum, EcoWhite or EcoWhite Platinum	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	82
S-9	Steel	Min. 1/4-inch-thick DensDeck or DensDeck Prime	Heavy-Duty or All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 2 ft ²	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL" in 1 or 2 layers	I.S.O. Twin-Pack Insulation Adhesive in continuous 1/2- to 3/4-inch-wide ribbons at 12 inches o.c. or I.S.O. FIX or I.S.O. STICK Adhesive in continuous 3/4- to 1-inch-wide ribbons at 12 inches o.c.	Min. 1/4-inch-thick DensDeck Prime	I.S.O. Twin-Pack Insulation Adhesive in continuous 1/2- to 3/4-inch-wide ribbons at 12 inches o.c. or I.S.O. FIX or I.S.O. STICK Adhesive in continuous 3/4- to 1-inch-wide ribbons at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	45

TABLE 4—WIND RESISTANCE – ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK ³	INSULATION		COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		TYPE ^{1,2}	ATTACHMENT ¹	TYPE ¹	ATTACHMENT ¹	TYPE	ATTACHMENT ¹	
S-10	Steel	1.5-inch-thick Firestone "ISO 95+GL"	Loose-laid	Min. 1/4-inch-thick DensDeck Prime	All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 2.1 ft ²	RubberGard EcoWhite or EcoWhite Platinum	WBBA (S) at 120 ft ² per gallon to substrate and underside of membrane	30
S-11	Steel	1.5-inch-thick Firestone "ISO 95+GL"	Loose-laid	Min. 1/4-inch-thick DensDeck Prime	All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 1.8 ft ²	RubberGard EcoWhite or EcoWhite Platinum	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	45
S-12	Steel	1.5-inch-thick Firestone "ISO 95+GL"	All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 2.67 ft ²	--	--	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 45 ft ² per gallon to substrate and underside of membrane	30
S-13	Steel	Min. 2-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	Heavy-Duty or All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per 4 ft ²	--	--	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon or WBBA (S) at 120 ft ² per gallon to substrate and underside of membrane	45
S-14	Steel	Min. 2-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	Heavy-Duty or All-Purpose Fastener with Insulation Fastening Plate at 1 fastener per ft ²	--	--	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	112
C-1	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	Full mopping of hot asphalt	Min. 1/4-inch-thick DensDeck	Full mopping of hot asphalt	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	165
C-2	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	Full mopping of hot asphalt	--	--	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	195
C-3	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	I.S.O. FIX Adhesive in continuous 3/4"- to 1-inch-wide ribbons at 12 inches o.c.	1/2-inch-thick "ISOGARD HD" or "Resista"	I.S.O. FIX Adhesive in continuous 3/4"- to 1-inch-wide ribbons at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon or WBBA (S) at 120 ft ² per gallon to substrate and underside of membrane	278
C-4	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	I.S.O. Twin-Pack Adhesive in continuous 1/2"- to 3/4-inch-wide ribbons at 12 inches o.c.	1/2-inch-thick "ISOGARD HD" or "Resista"	I.S.O. FIX Adhesive in continuous 1/2"- to 3/4-inch-wide ribbons at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon or WBBA (S) at 120 ft ² per gallon to substrate and underside of membrane	248
C-5	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	I.S.O. Twin-Pack Adhesive in continuous 1/2"- to 3/4-inch-wide ribbons at 12 inches o.c.	--	--	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	390

TABLE 4—WIND RESISTANCE – ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK ³	INSULATION		COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		TYPE ^{1,2}	ATTACHMENT ¹	TYPE ¹	ATTACHMENT ¹	TYPE	ATTACHMENT ¹	
C-6	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	I.S.O. STICK Adhesive in continuous ³ / ₄ - to 1-inch-wide ribbons at 12 inches o.c.	Min. ¹ / ₄ -inch-thick DensDeck or DensDeck Prime	I.S.O. STICK Adhesive in continuous ³ / ₄ - to 1-inch-wide ribbons at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	232
C-7	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	I.S.O. STICK Adhesive in continuous ³ / ₄ - to 1-inch-wide ribbons at 12 inches o.c.	--	--	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	270
C-8	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL"	I.S.O. STICK Adhesive in continuous ³ / ₄ - to 1-inch-wide ribbons at 12 inches o.c.	¹ / ₂ -inch-thick "ISOGARD HD" or "Resista"	I.S.O. STICK Adhesive in continuous ³ / ₄ - to 1-inch-wide ribbons at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	322
LC	Elastizell lightweight concrete, min. 160 psi	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL", Hunter Panels "H-Shield" or Atlas Roofing Corp. "ACFoam-II"	Olympic Fasteners "OlyBond 500" in continuous ³ / ₄ - to 1-inch-wide ribbons at 12 inches o.c.	Min. ¹ / ₄ -inch-thick DensDeck or DensDeck Prime	Olympic Fasteners "OlyBond 500" in continuous ³ / ₄ - to 1-inch-wide ribbons at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	225
CWF	"Tectum I" cementitious wood fiber	Min. 1.5-inch-thick to max. 4-inch-thick Firestone "ISO 95+GL", Hunter Panels "H-Shield" or Atlas Roofing Corp. "ACFoam-II"	Olympic Fasteners "OlyBond 500" in continuous ³ / ₄ - to 1-inch-wide ribbons at 12 inches o.c.	Min. ¹ / ₄ -inch-thick DensDeck or DensDeck Prime	Olympic Fasteners "OlyBond 500" in continuous ³ / ₄ - to 1-inch-wide ribbons at 12 inches o.c.	Any RubberGard membrane	BA-2004 (T) Bonding Adhesive at 60 ft ² per gallon to substrate and underside of membrane	45

For SI: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 psf = 47.88 Pa; 1 gal = 3.785 L.

¹Insulation, adhesives and fasteners must be FM-approved.

²All foam plastic insulation must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table, whichever is less.

³Wood deck must be minimum ¹⁵/₃₂-inch-thick (11.9 mm) plywood. Steel deck must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength (*f_c*) of 2500 psi [minimum of 24MPa is required under ADIBC Appendix L, Section 5.1.1], unless otherwise noted. See Section 5.7 of this report.

TABLE 5—WIND RESISTANCE – MECHANICALLY FASTENED ROOFING SYSTEMS

SYSTEM NO	DECK ³	INSULATION		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		TYPE ^{1,2}	ATTACHMENT ¹	TYPE	ATTACHMENT ¹	
MW-1	Wood	Min. 1.5-inch-thick, any UL- classified polyisocyanurate insulation	Mechanically fastened per FM preliminary fastening requirements	RubberGard MAX, MAX FR or MAX PT	QuickSeam R.M.A. Strip At 9 ft-6 inches o.c., with Polymer Batten Bar and All-Purpose Fasteners at 6 inches along the batten bar	45
MSC-1	Steel or concrete	Min. 1.5-inch-thick, any UL- classified polyisocyanurate insulation	Mechanically fastened per FM preliminary fastening requirements	RubberGard MAX, MAX FR or MAX PT	Heavy-Duty Fastener or All-Purpose Fastener (on steel deck only) with V-Plate at 6 inches o.c. within the roof cover 7-inch laps, in rows 7 ft o.c.	52
MS-1	Steel	Min. 1.5-inch-thick, any UL- classified polyisocyanurate insulation	Mechanically fastened per FM preliminary fastening requirements	Standard RubberGard, RubberGard LS-FR, LS-FR PT, FR or Platinum	QuickSeam R.M.A. Strip At 7 ft o.c., with Coiled Metal Batten Bar and All-Purpose Fasteners at 6 inches along the batten bar	30
MS-2	Steel	Min. 1.5-inch-thick, any UL- classified polyisocyanurate insulation	Mechanically fastened per FM preliminary fastening requirements	RubberGard MAX, MAX FR or MAX PT	Coiled Metal Batten Bar and Heavy-Duty Fastener at 6 inches o.c. within the roof cover 7-inch laps, in rows 7 ft o.c.	38
MS-3	Steel	Min. 1.5-inch-thick, any UL- classified polyisocyanurate insulation	Mechanically fastened per FM preliminary fastening requirements	Standard RubberGard, RubberGard LS-FR, LS-FR PT, FR or Platinum	QuickSeam R.M.A. Strip At 6 ft o.c., with Coiled Metal Batten Bar and Heavy Duty Fasteners at 12 inches along the batten bar	38
MS-4	Steel	Min. 1.5-inch-thick, any UL- classified polyisocyanurate insulation	Mechanically fastened per FM preliminary fastening requirements	RubberGard MAX, MAX FR or MAX PT	Coiled Metal or Polymer Batten Bar and Heavy-Duty or All-Purpose Fastener at 6 inches o.c. within the roof cover 6-inch wide side laps, and in rows 7 ft o.c.	52

For **SI**: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 psf = 47.88 Pa; 1 gal = 3.785 L.

¹Insulation, adhesives and fasteners must be FM-approved.

²All foam plastic insulation must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table, whichever is less.

³Wood deck must be minimum 15/32-inch-thick (11.9 mm) plywood. Steel deck must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength (f_c) of 2500 psi, unless otherwise noted. See Section 5.7 of this report.